

WHAT IS CLAIMED IS

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1. A developer, comprising:

a base toner containing at least a binding  
resin and a coloring agent; and

inorganic fine particles;

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wherein the base toner satisfies  $105 \leq SF-1 \leq$

130 and  $120 \leq SF-2 \leq 180$ ,

wherein  $SF-1 = ((\text{absolute maximum length of a  
particle of the base toner})^2 / (\text{area of the particle of the  
base toner}) \times (\pi/4) \times 100$ ,

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wherein  $SF-2 = (\text{peripheral length of the  
particle of the base toner})^2 / (\text{area of the base toner}) \times  
(1/4 \pi) \times 100$ ,

wherein the inorganic fine particles have an  
average particle diameter that ranges between 30nm to

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160 nm.

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2. The developer as claim in claim 1, wherein

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Related Pending Application
Related Case Serial No: <u>10/615,770</u>
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the inorganic fine particles are formed as silica.

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3. The developer as claimed in claim 1,  
wherein the inorganic fine particles are applied with a  
sol-gel technique and are thereby formed as spherical  
shaped hydrophobic silica fine particles.

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4. The developer as claimed in claim 1,  
15 wherein the developer contains further inorganic fine  
particles having an average particle diameter which is  
smaller than the inorganic fine particles.

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5. The developer as claimed in claim 1,  
wherein the developer is combined with a magnetic  
particle to function as a carrier.

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6. An image forming apparatus, comprising:
- 5 a developer for developing an electrostatic latent image formed on an electrostatic latent image carrier body to form a toner image;
- a transfer unit for transferring the toner image to a transfer medium;
- 10 wherein the developer includes a further developer and a carrier,
- wherein the further developer has a base toner containing at least a binding resin and a coloring agent, and inorganic fine particles,
- 15 wherein the carrier has a magnetic particle,
- wherein the base toner satisfies  $105 \leq SF-1 \leq 130$  and  $120 \leq SF-2 \leq 180$ ,
- wherein  $SF-1 = ((\text{absolute maximum length of a particle of the base toner})^2 / \text{area of the particle of the base toner}) \times (\pi / 4) \times 100$ ,
- 20 wherein  $SF-2 = (\text{peripheral length of the particle of the base toner})^2 / (\text{area of the base toner}) \times (1/4 \pi) \times 100$ ,
- wherein the inorganic fine particles have an
- 25 average particle diameter that ranges between 30nm to

160 nm.

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7. The image forming apparatus as claimed in claim 6, wherein the inorganic fine particles are formed as silica.

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8. The image forming apparatus as claimed in claim 6, wherein the inorganic fine particles are applied with a sol-gel technique and are thereby formed as spherical shaped hydrophobic silica fine particles.

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9. The image forming apparatus as claimed in claim 6, wherein the developer contains further inorganic fine particles having an average particle diameter which is smaller than the inorganic fine particles.

5                   10. The image forming apparatus as claimed in  
claim 6, wherein the developer is combined with a  
magnetic particle to function as a carrier.

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11. The image forming apparatus as claimed in  
claim 6, wherein the developer includes a plurality of  
colors.

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12. A process cartridge, comprising:  
20                   a charge unit charging a photoconductor;  
                  an exposure unit exposing light to the  
photoconductor to form an image on the photoconductor;  
                  a development unit developing the image formed  
on the photoconductor with a developer;  
25                   a transfer unit transferring the image formed

on the photoconductor to a transfer medium;

a cleaning unit cleaning the transfer unit;

wherein the developer includes a further  
developer and a carrier,

5            wherein the further developer has a base toner  
containing at least a binding resin and a coloring agent,  
and inorganic fine particles,

wherein the carrier has a magnetic particle,

wherein the base toner satisfies of  $105 \leq SF-1$   
10  $\leq 130$  and  $120 \leq SF-2 \leq 180$ ,

wherein  $SF-1 = ((\text{absolute maximum length of a particle of the base toner})^2 / \text{area of the particle of the base toner}) \times (\pi/4) \times 100$ ,

wherein  $SF-2 = (\text{peripheral length of the particle of the base toner})^2 / (\text{area of the base toner}) \times$   
15  $(1/4\pi) \times 100$ ,

wherein the inorganic fine particle has an  
average particle diameter that ranges between 30nm to  
160 nm.

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13. The process cartridge as claimed in claim  
25 12, wherein the inorganic fine particles are formed as

silica.

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14. The process cartridge as claimed in claim 12, wherein the inorganic fine particles are applied with a sol-gel technique and are thereby formed as spherical shaped hydrophobic silica fine particles.

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15 15. The process cartridge as claimed in claim 12, wherein the developer contains further inorganic fine particles having an average particle diameter which is smaller than the inorganic fine particles.

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16. The process cartridge as claim in claim 12, wherein the developer is combined with a magnetic particle to function as a carrier.

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17. A image forming method, comprising the
- 5 steps of:
- charging a photoconductor;
  - exposing light to the photoconductor to form
  - an image on the photoconductor;
  - developing the image formed on the
  - 10 photoconductor with a developer;
  - transferring the image formed on the
  - photoconductor to a transfer medium;
  - wherein the developer includes a further
  - developer and a carrier,
  - 15 wherein the further developer has a base toner
  - containing at least a binding resin and a coloring agent,
  - and inorganic fine particles,
  - wherein the carrier has a magnetic particle,
  - wherein the base toner satisfies  $105 \leq SF-1 \leq$
  - 20  $130$  and  $120 \leq SF-2 \leq 180$ ,
  - wherein  $SF-1 = ((\text{absolute maximum length of a}$
  - $\text{particle of the base toner})^2 / \text{area of the particle of the}$
  - $\text{base toner})^2 \times (\pi / 4) \times 100$ ,
  - wherein  $SF-2 = (\text{peripheral length of the}$
  - 25  $\text{particle of the base toner} / \text{area of the base toner}) \times (1/4$



$\pi) \times 100,$

wherein the inorganic fine particles have an average particle diameter that ranges between 30nm to 160 nm.

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18. The image forming method as claimed in claim 17, wherein the inorganic fine particles are formed as silica.

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19. The image forming method as claimed in claim 17, wherein the inorganic fine particles are applied with a sol-gel technique and are thereby formed as spherical shaped hydrophobic silica fine particles.

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20. The image forming method as claim in claim 17, wherein the developer contains further

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inorganic fine particles having an average particle diameter which is smaller than the inorganic fine particles.

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21. The image forming method as claim in claim 17, wherein the developer is combined with a  
10 magnetic particle to function as a carrier.